WHAT IS CLAIMED IS:

1. A solid-state image pickup apparatus including an array of a plurality of unit cells, each of the unit cells including a plurality of photoelectric conversion elements for converting an photo-signal to signal charge and storing the signal charge and one amplification element for receiving signal charge of each of the photoelectric conversion elements and outputting a signal corresponding to the signal charge, comprising:

a readout circuit system connected to an output line of the amplification element, for inputting thereto a signal output from the unit cell via the output line, wherein the readout circuit system comprises difference means for inputting thereto a first signal corresponding to a reset level of an input portion of the amplification element, a second signal corresponding to the first signal to which a signal corresponding to signal charge stored in at least one of the plurality of photoelectric conversion elements is added, and a third signal corresponding to the second signal to which a signal corresponding to signal charge stored in at least one of the plurality of photoelectric conversion elements is added, and operating a difference with respect to a plurality of combinations of any two signals of the first, second and third signals.

2. The solid-state image pickup apparatus according to claim 1, wherein the difference means operates a difference between the first signal and the second signal, and a difference between the second signal and the third signal.

3. The solid-state image pickup apparatus according to claim 1, wherein the difference means operates a difference between the first signal and the second signal, and a difference between the first signal and the third signal.

4. The solid-state image pickup apparatus according to claim 1, wherein the amplification element is an amplification transistor,

wherein the unit cell further comprises transfer means connected between a control electrode of the amplification transistor and the photoelectric conversion elements, and

wherein signal charge stored in each of the photoelectric conversion elements is transferred to the control electrode of the amplification transistor via the transfer means.

5. An image pickup system comprising the solid-state image pickup apparatus according to claim 1, an optical system for focusing light onto the solid-

state image pickup apparatus, and a signal processing circuit for processing an output signal from the solid-state image pickup apparatus.